

## CLAIMS

1. A fluorescent lamp system comprising:
  - a substrate;
  - a first channel formed in the substrate;
  - a second channel formed in the substrate;
  - a cover lid attached to the substrate, the cover lid forming a first enclosure in the first channel and a second enclosure in the second channel; and
  - a fluorescent material in the first enclosure and the second enclosure to form a first lamp in the first enclosure and a second lamp in the second enclosure.
2. The fluorescent lamp of claim 1 wherein the first channel is interdigitated with the second channel.
3. The fluorescent lamp of claim 1 wherein the first channel and the second channel comprises serpentine shaped channels.
4. The fluorescent lamp of claim 1 wherein the first channel and the second channel comprises serpentine shaped channels and wherein the first channel is interdigitated with the second channel.

5. The fluorescent lamp of claim 1 further comprising a first a first set of cathodes formed in the first channel and a second set of cathodes formed in the second channel.
6. The fluorescent lamp of claim 1 further a third channel formed in the substrate to form a third enclosure defining a third lamp.
7. The fluorescent lamp of claim 1 further comprising:  
  
a second substrate, the second substrate proximate the substrate;  
  
a third channel formed in the second substrate, the third channel defining a third lamp, the third channel adjacent to the first channel in the substrate such that light can pass from the third lamp to the first lamp.
8. The fluorescent lamp of claim 7 further comprising a fourth channel formed in the second substrate to form a fourth lamp.

9. A fluorescent lamp system comprising:

a first substrate, the first substrate including a first channel;

a first pair of cathodes at the first channel, the first channel and the first pair of cathodes defining a first lamp;

a second substrate proximate to the first substrate, the second substrate including a second channel; and

a second pair of cathodes at the second channel, the second channel and the second pair of cathodes defining a second lamp.

10. The fluorescent lamp system of claim 9 the second substrate is proximate the first substrate such that the second channel is adjacent to the first channel such that light can pass from the second channel to the first channel.

11. The fluorescent lamp system of claim 9 wherein the first channel and the second channel are coated with a coating of fluorescent material, and wherein the coating of fluorescent material is omitted from a region in the first channel to define an aperture through which light can be transmitted from the second channel to the first channel.

12. The fluorescent lamp system of claim 11 wherein the first channel includes a bottom interior side and wherein the fluorescent material is omitted from the bottom interior side of the first channel to define the aperture.

13. The fluorescent lamp system of claim 9 wherein the first substrate is coupled to the second substrate through a transparent cover on the second substrate.

14. The fluorescent lamp system of claim 9 further comprising:

a third channel formed in the first substrate, and

a third pair of cathodes formed at the third channel, the third channel and third pair of cathodes defining a third lamp.

15. The fluorescent lamp system of claim 14 further comprising:

a fourth channel formed in the second substrate, and

a fourth pair of cathodes formed at the fourth channel, the fourth channel and fourth pair of cathodes defining a fourth lamp.

16. The fluorescent lamp system of claim 14 wherein the third channel is adjacent the fourth channel such that light can pass from the fourth channel to the third channel.

17. A fluorescent lamp system comprising:

a first substrate;

a first serpentine channel formed in the first substrate;

a second serpentine channel formed in the first substrate, the second serpentine channel interdigitated with the first serpentine channel;

a first pair of electrodes formed in the first serpentine channel;

a second pair of electrodes formed in the second serpentine channel;

a cover lid attached to the substrate, the cover lid forming a first enclosure in the first serpentine channel and a second enclosure in the second serpentine channel;

a first fluorescent material in the first enclosure, the first fluorescent material, the first pair of electrodes and the first channel defining a first lamp; and

a second fluorescent material in the second enclosure, the first fluorescent material, the second pair of electrodes and the second channel defining a second lamp.

18. The fluorescent lamp system of claim 17 further comprising:

a second substrate adjacent to the first substrate;

a third serpentine channel formed in the second substrate;

a fourth serpentine channel formed in the second substrate, the fourth serpentine channel interdigitated with the third serpentine channel;

a third pair of electrodes formed in the third serpentine channel;

a fourth pair of electrodes formed in the fourth serpentine channel;

a transparent lid attached between the first substrate and the second substrate, the transparent lid forming a third enclosure in the third serpentine channel and a fourth enclosure in the fourth serpentine channel;

a third fluorescent material in the third enclosure, the third fluorescent material, the third pair of electrodes and the third channel defining a third lamp; and

a fourth fluorescent material in the fourth enclosure, the fourth fluorescent material, the fourth pair of electrodes and the fourth channel defining a fourth lamp.